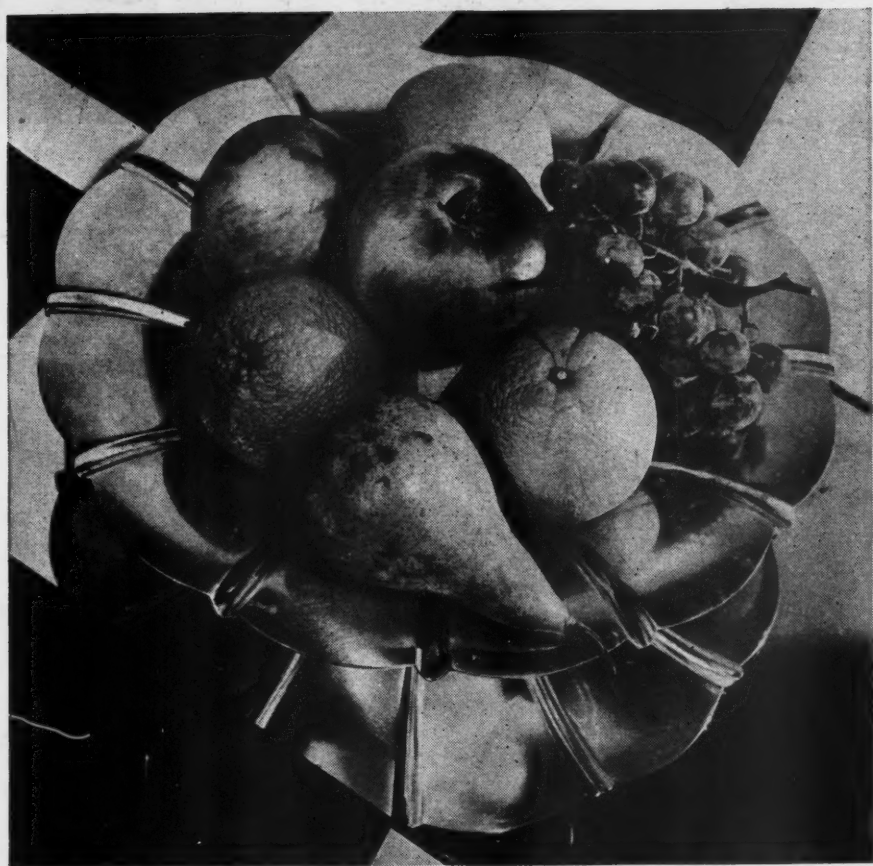
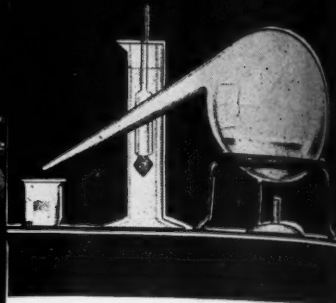
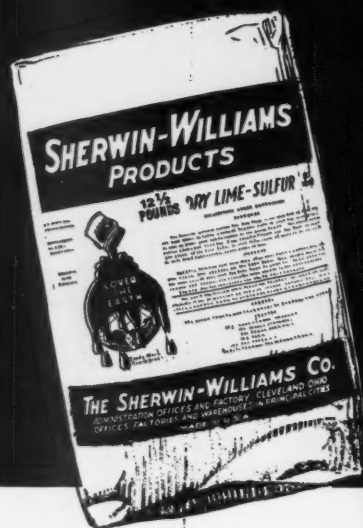


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FOR BETTER FRUIT IN 1934



What The Ohio Experiment Station Thinks Of Sherwin-Williams Dry Lime Sulfur As A Summer Spray For Apples

**SPRAY WITH
SHERWIN-
WILLIAMS
ARSENATE
OF LEAD
IN
1934
AND
WASH**



Ohio Experiment Station Bulletin 500, Page 21

"In practice the dry form has proven to be slightly more effective in disease control and causes less injury than an equal concentration of the liquid. Apparently, in the drying process or because of the effect of the stabilizer, the sulfides are rendered less toxic to foliage and the subsequent deposit of sulfur is in a more finely divided form.

"Since dry lime-sulfur is safer and yet equally as effective as liquid lime-sulfur, it is preferred for summer sprays on apples."

* * * * *

Foliage injured by liquid lime-sulfur cannot produce high-quality fruit. Russeted apples bring low prices. Therefore, plan now to spray your trees next spring with SHERWIN-WILLIAMS DRY LIME SULFUR.

SHERWIN-WILLIAMS



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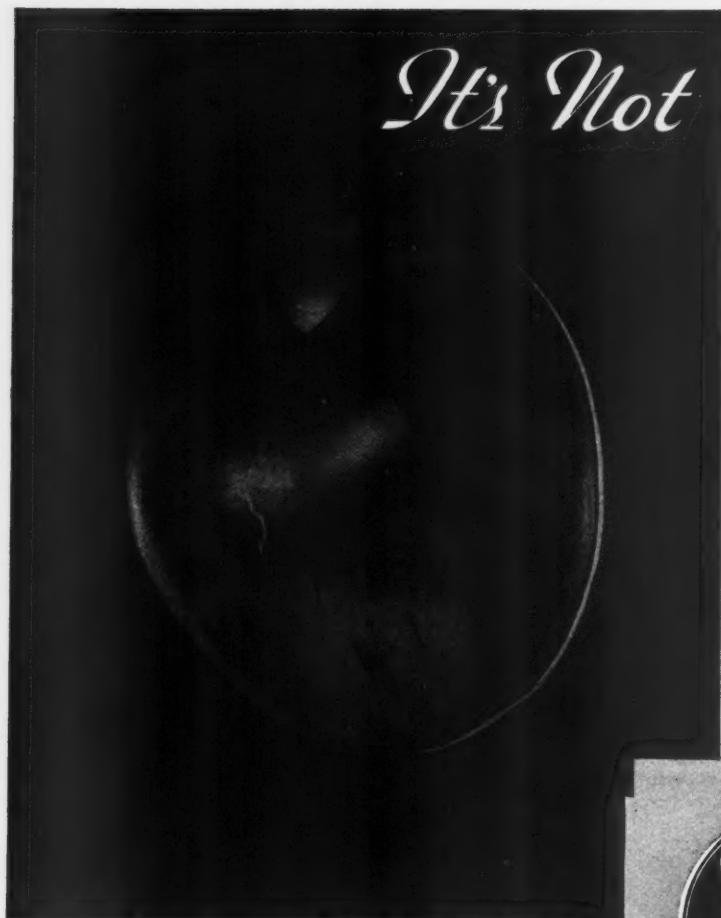
IF YOU ARE INTERESTED
in more profitable spraying, send for this "Golden Anniversary" Catalog.

JOHN BEAN MFG. CO., Division of Food Machinery Corporation,
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 No. of Acres _____ Kind of Fruit _____

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It's Not How **MANY**
YOU GROW -

It's How Many
**EXTRA
FANCY**
YOU HARVEST



*.. Dependable
spray materials
properly applied
mean
Quality Fruit*

THE AIM of the successful grower is to produce what the market demands—fruit that grades "Extra Fancy." It's the clean, sound, full-color apples that are moved—and at premium prices.

It has been well said that "spraying is the most important thing the grower does to produce quality fruit." That means dependable spray products—properly applied.

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AMERICAN FRUIT GROWER

(Title Registered in U. S. Patent Office)

VOLUME 54 No. 1

JANUARY, 1934

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Poor Mark Twain

When Mark Twain was a Nevada Journalist he had a poem accepted by an eastern publication. Finally he received the paper containing his contribution. The author's name, however, instead of being Mark Twain, had been garbled by printers to read "Mack Swain."

Printers still continue to err.
AMERICAN FRUIT GROWER renders its apologies to the author of that well written story, "How the Fruit Auction Functions," which appeared in our December number. Its author was J. W. Park, Agricultural Economist, U. S. D. A., Washington, D. C. The article was erroneously signed "C. B. Park." We regret the error.

—Editor.

CRAB APPLES AND PIPPINS

NATURE gave us the crab-apple, but by co-operating with Nature, horticulture has evolved the "Pippin". Wonders are achieved by harmonious co-operation, not alone in perfecting varieties, but in creating prosperity for fruit growers. One sure way out of the crab-apple stage is through the wide spread co-operation of every grower in solving the problems of production, distribution and merchandising. Mutual co-operation requires organization, and fortunately fruit growers have two organizations which are qualified to deal with any problem, be it local, state or national. It remains but for the fruit grower to join his State Horticultural Society and the American Pomological Society, the former for local and state matters, and the latter in solving national problems. However, it takes money to represent fruit growers in Washington, D. C., and elsewhere, and such funds must be taken out of membership dues. Obviously the greater the membership, the more money becomes available for constructive work in their behalf. Never in the past has it been so important for fruit growers to have able representation. Industry is organized and other branches of agriculture are constantly represented at Washington, and therefore some steps must be taken to safeguard the interest of fruit growers.

Join the American Pomological Society and your State Horticultural Society now. These organizations are of a high order and include the most progressive and able orchardists. Write AMERICAN FRUIT GROWER for information. Remember, too, that membership in these societies carries considerable prestige.

Scores of industries have converted losses into profits through organization brought about by codes. There never was greater need for concerted action. Organization based upon mutual co-operation means growth and prosperity. Let's all pull together!

E. G. K. Meister
Publisher

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One of the grower displays recently exhibited and receiving the blue ribbon at the Bangor Apple Show (Bangor, Michigan).



This picture shows why the pomolo is commonly called "grapefruit." Doesn't this look like a bunch of grapes?



Maine boasts some of the oldest apple orchards of improved varieties remaining in commercial bearing. This one is over 80 years old.

A PICTORIAL REVIEW OF THE FRUIT WORLD

The camera has captured three interesting pictures for readers of the American Fruit Grower. A blue ribbon display at the Bangor Apple Show, a glimpse of one of the oldest apple orchards and a night flash that reveals why grapefruit are called "grape" fruit.

Watch this page each month for its pictorial review of the fruit world. If you have interesting photographs of horticultural events, send them in. The American Fruit Grower will pay \$1.00 for each photograph accepted for publication on this page.

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HENRY A.
WALLACE
Secretary of
Agriculture



FRUIT SITUATION BETTER

SAYS U. S. SECRETARY OF AGRICULTURE

THE economic position of fruit and vegetable growers in the United States as a whole is much improved over that of last year and even that of 1931. After 3 years of declining prices and sharply reduced incomes, the producers of these commodities are experiencing a reversal of the trend this year and are receiving much more satisfactory returns.

Preliminary estimates of gross income from all fruits and vegetables indicate that the 1933 total is likely to be about one half again as large as that of 1932, about one sixth larger than the income in

1931, and only about one tenth smaller than that of 1930.

Production of all fruits together this year is approximately 2 per cent below that of 1932, which was about an average crop. Production of apples, peaches, and prunes is slightly larger than last year but less than the average, while that of pears and grapes is smaller. Production of all fruits, excluding citrus, is about 12 per cent below average. Citrus crops probably will be slightly smaller than last year, but about 25 per cent greater than the 1924-29 average. Two hurricanes, one

striking Florida and the other southern Texas during the first week of September, did considerable damage to the citrus crops in those areas.

With the shorter supplies available for market and with improvement over last season in the demand situation, prices of most fruits and vegetables are higher than they were in 1932. Fruit prices in general are up about 20 per cent. Most of this advance has come in the latter half of the season, at the beginning of which it became known that short crops of the major fruits and vegetables were in prospect.

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WHAT THE NEW YEAR HOLDS IN

A SYMPOSIUM OF OPINION AND FORECAST

FOR those fruit growers who can successfully meet the intricate problems ahead, 1934 holds excellent prospects. Competition has been reduced through the forced neglect of many producing units. Increased purchasing power is freely predicted.

The most serious problems are financing, pest control, residue tolerances, drouth, fertilization, and marketing.

Three years of low prices and small crops have exhausted surplus funds. Local credit, frequently on good security, is not available. Manufacturers can hardly extend further credit. Economy may have reached the limit of good practice. Government loans on land or crop may offer a solution to the problem.

Insects and diseases must be controlled, regardless of residues. Thorough and frequent applications of standard sprays have proved more widely effective than newer substitutions. This program will necessitate provision for washing.

Better grading of high quality fruit, combined with federal shipping-point inspection, and, in some cases, cooperative packing, will reduce marketing hazards.

THE deciduous fruit industry of the Northwest has passed through three precarious years of low prices, fixed costs which were difficult to reduce, and a lack of sufficient organization to meet our situation. Yet, strange to say, we have maintained orchards in fair condition, most of our best orchard ownership is intact, and the quality of our fruit is outstanding.

We are building a better crop financing policy through the Farm Credit Administration. We are organizing under the new code agreement to eliminate cut-throat competition and unfair sales practices, while furnishing to the markets a controlled supply of high quality fruit. We are finding new uses for our low grade fruit in by-products, and we are developing transportation so that we can rationalize freight rates.

The reflation policy of the government should increase buying power, make possible greater export markets for the fruit grower, and bring him back into renewed prosperity, that is, if he will deliver quality goods at a fair price. I am inclined to think that our section is going to have to follow the fruit to market, insist on fair prices, and secure better handling on the part of the retailer.

IT is going to be the part of wisdom to analyze carefully how, during the coming year, production costs can be lessened without seriously reducing the vigor and health of the fruit plants. Even though in some orchards it may be feasible to modify the pruning, soil management and fertilization programs in the interest of economy, it seems clear that in most regions no reduction in the spraying program can be countenanced, if high quality fruit free from insect and disease blemishes is to be produced.

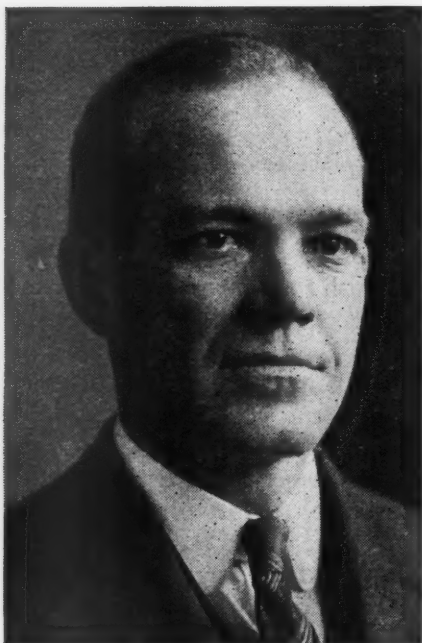
Recent results of excellent research investigations by the Agricultural Experiment Stations and the United States Department of Agriculture, should be of immense value to fruit growers if put into practice throughout the whole country.

It should be possible (barring unforeseen catastrophes) for growers to increase their production per tree or per acre of high quality fruit on the desirable orchard sites. As a result, cost of production should be less, and it seems reasonable to expect that with changes in and better marketing facilities, as a result of the Agricultural Adjustment Act, a greater net and total profit will be received.

Laurenz Greene

A. R. Chase

E. C. Auchter



Dr. Laurenz Greene, President
American Society for Horticultural Science



Mr. A. R. Chase, County Agent
Wenatchee, Wash.



Dr. E. C. Auchter, Principal Horticulturist
Bureau of Plant Industry U. S. D. A.

AMERICAN FRUIT GROWER

STORE FOR AMERICAN FRUIT GROWERS

By SOME OF THE COUNTRY'S LEADING AUTHORITIES

WHAT does 1934 hold in store by way of happiness or sorrow, success or failure for the American fruit grower?

1933 weather conditions were favorable for fruit bud formation in apples, pears, cherries, peaches and grapes over most of the North American sections. Generally light crops also point to plenty of bloom in 1934. Considerable let down in the spraying program in 1933 resulted in some loss of foliage in a good many orchards, but the reduction in fruit bud formation due to this cause was much more than offset by favorable weather.

Financial conditions are improving and the gradual approach of stability will be advantageous to the fruit growers in 1934.

The fixing of the spray tolerances at no material change from 1933 is helpful and comes early enough to permit wise planning for the coming season.

The probability of a reduced export market is the principal fly in the fruit growers' prospects next year. A moderate crop instead of a heavy one will be productive of larger profits and more satisfaction in the industry.

THERE is every reason to look for better results in the marketing of the 1934 California and Arizona citrus crop than were obtained in 1933 for the reason that estimates indicate a somewhat shorter crop, at least for oranges, and secondly the national marketing agreements that are now nearing completion will make possible a better regulation and distribution of the supply in accord with demand. In addition, re-employment of many wage earners should mean the return of citrus fruits to many family tables that have had little or none of these fruits for several years.

Although returns for last year's citrus crop were far from satisfactory, still I believe the fact that over 75,000 carloads of oranges, lemons and grapefruit were sold for an f.o.b. return to the State approximating 68½ million dollars is definite proof of the substantial demand that has been created and is evidence of the value of the many years of advertising and market expansion done by the Sunkist growers. Total citrus sales from California and Arizona were only 5 per cent less by volume and 12 per cent less in money return than in 1932.

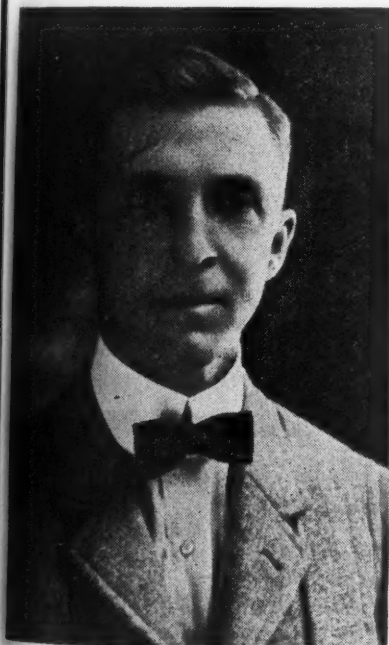
MANY fruit growers and others interested in the United States apple industry feel that our business has had more than its share of losses and disappointments during the past few years. This condition has been brought about no doubt by the unsettled state of our markets and the increased cost and increased labor necessary to the production of good fruit. However, we are naturally an optimistic group of citizens, or else we would not set out orchards with the hope that in years to come we would receive a revenue from them.

As we look towards the coming year our optimism seems to be justified and seems to have real foundation. Our markets are not so unsettled and through the aid of our county, state and national farm organizations, we are learning how to better care for our fruit. We are looking ahead also to a continued, and we believe a rightful, tolerance policy from our Federal Food and Drug Administration. Regardless of political faith, we are joining the other great industries of our country in backing up our President and through his leadership looking forward to a prosperous 1934.

B. S. Pickett

Paul S. Armstrong

Ewart J. Cowper



Prof. B. S. Pickett, President
American Pomological Society



Mr. Paul S. Armstrong, General Manager
California Fruit Growers Exchange
AMERICAN FRUIT GROWER



Mr. E. G. Cowper, President
New York State Horticultural Society

JANUARY, 1934

Over the Editor's desk

FRUIT growers, to some extent, are now asking, just what many other farmers are asking, namely, for information on how to secure a government loan. Unfortunately, this question cannot be answered in a few words, as there are several kinds of loans available and more than one method of getting them, depending upon the location of the farm and the financial situation involved.

To begin with, there are three kinds of government farm loans: Federal Land Bank Loans, Land Bank Commissioner Loans, and Production Credit Loans. The first type is somewhat restricted as to application, as the Federal land banks make loans only upon first mortgages. Loans may vary between \$100 and \$50,000, but not to exceed 50% of the appraised normal land value and 20% of the permanent, insured improvements.

The second type, which is of more recent origin, is more suited for refinancing purposes. Any person engaged in farming is eligible for such a loan, which may be used "to provide working capital for farm operations." The amount borrowed may not exceed \$5,000 to any one farmer, but a loan may be made on the security of a second mortgage. Such a loan does not require payments on principal for a three year period, nor complete repayment for 40 years. Other loans must be repaid prior to ten years after the first payment is due.

The third type of loan is one more commonly known, since it has been utilized quite generally by certain classes of farmers during the past year. Most of these loans are made for less than 12 months, and none for over 3 years, for the purpose of producing and harvesting crops. Such loans are secured by liens on such crops, livestock and other personal property.

Owing to the fact that the entire country is divided into twelve districts, represented by the same number of cities where Federal land banks are located, there is certain to be some difference in the manner various provisions of the Farm Credit Administration are interpreted. In one district, for instance, the maximum Land Bank Commissioner's loan obtainable on orchard land is 50% of the appraised land value, plus 50% of a \$250 per acre maximum enhancement to cover the orchard trees and production setup. In general, however, satisfactory loans may be secured when adequate security is given, which will enable fruit growers having productive trees in favorable locations to purchase necessary supplies and equipment to grow and harvest the yield, and thus obtain a crop which will, under normal circumstances, bring him a profit.

More detailed and definite information on the methods involved in securing the most satisfactory type of loan, to meet the requirements of a specific orchard, may always be obtained through your County Agricultural Agent, or the Federal Land Bank office of your district. The AMERICAN FRUIT GROWER will, however, if the demand is sufficient to warrant it, print a more detailed article on this subject, with special reference to the fruit growers of intensive fruit areas.



DR. F. A. MOTZ, Federal European Representative, told an eastern audience of fruit growers not long ago

that if they thought they could dump fruit upon foreign markets, which was poor in quality and pack, they were doomed to disappointment. On the other hand, he assured them that patriotism did not enter into fruit sales. He instanced an occasion in England when poorly packed Canadian fruit was passed by, while buyers staged something like stock market scenes in their eagerness to secure a beautiful pack of fine fruit from the United States of America. Foreign buyers will always choose good, clean, well-packed fruit from America, in preference to the offerings of any other country which did not fulfill these requirements.

This advice should not be given alone to packers and shippers of fruit to foreign markets. Our domestic markets and consumers not only deserve the same consideration, but the rewards for well-graded, honestly packed and marked fruit will accompany such methods. Buyers soon learn to distinguish between the various growers or packers by their names or brands, and will choose or pay a premium for the fruit which can be depended upon to be as good or better than it is marked.



WE have the great pleasure to announce with this issue the beginning of a co-operative affiliation between the AMERICAN FRUIT GROWER and the American Pomological Society which has adopted our magazine as its official monthly publication. This society is the oldest national fruit growers' organization in the United States, beginning its 85 years of service in the early days of American fruit growing.

Enriched by its past traditions, the A. P. S. faces a future of great opportunity. There is, to begin with, a new era of interest in fruit variety improvement. In this field, the A. P. S. has always served as the highest authority in the establishment of nomenclature codes and in placing the stamp of approval on superior varieties. An equal or greater opportunity, however, lies in its ability to represent the fruit growers of this country in problems of nationwide scope and importance, when state and sectional groups cannot act so effectively. This great countrywide and co-ordinating influence is certain to be felt at the present time when more and more of the fruit growers' problems are of common and national importance.

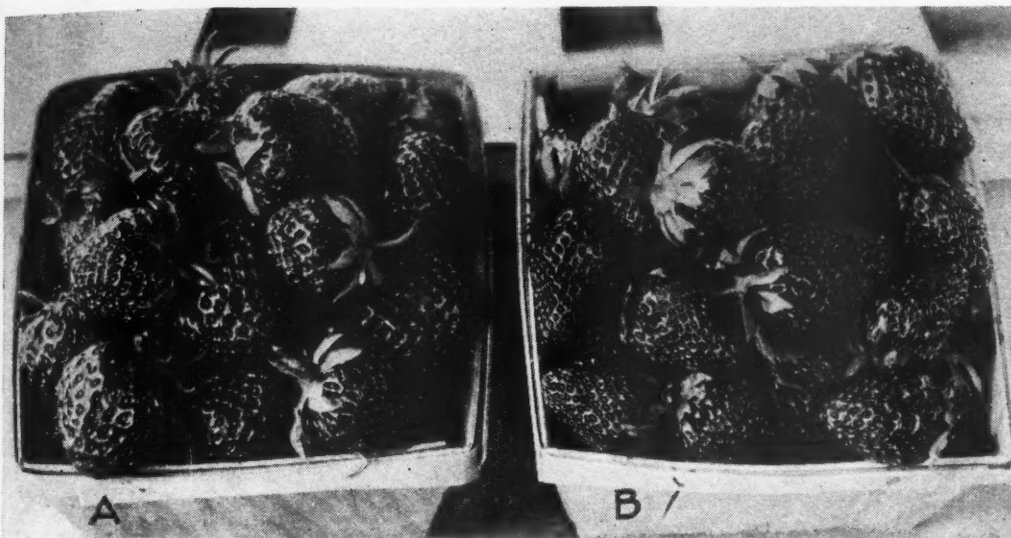
We are indeed glad to join hands with this renowned society which is now enlarging its activities and effectiveness in meeting the great national problems of the fruit industry, and we suggest as many as possible of our readers join in continuing and promoting its great work.



And may I add—

A Happy and Prosperous New Year!

J. T. Bregger



Boxes of (A) Southland and (B) Bellmar Strawberries grown at Willard, N. C.

Seven New Strawberries Introduced by U. S.

By GEORGE M. DARROW

Chief of Small Fruits Division, U. S. D. A.

THE strawberry breeding work, from which the seven new varieties have resulted, began thirteen years ago at the Plant Field Station near Glenn Dale, Maryland. The original work was directed toward producing, first, varieties much superior in dessert quality to existing market sorts, and second, varieties which hold their color and flavor when canned or frozen.

The first variety selected for introduction was the Blakemore, a berry adapted for growing in the South with superior qualities both for the general market and for the preserving industry. Next were introduced Bellmar, another general market variety; Southland, a high quality berry for the home garden and local market for the South; and Redheart, a canning sort for the Pacific Northwest and, to some extent, for all northern sections. Dorsett, Fairfax, and Narcissa are the last three varieties to be introduced. All have superior dessert quality, Narcissa being especially adapted to the Northwest and the Dorsett and Fairfax adapted to eastern conditions. The maps shown as Figs. 1 to 3 indicate the general area for which each variety is suggested.

Perhaps the value of these varieties can be estimated best by discussing each one in relation to the other kinds now grown in the various regions of the United States. For the general market, it is possible that the Blakemore will at least in part gradually replace other varieties from

Norfolk, Virginia, and Georgia, west to Texas, Arkansas and southern California. This is approximately the area to which the Klondike is adapted. It is doubtful if the Blakemore will replace Missionary in Florida or the Missionary and the Klondike in southern Alabama, Louisiana or Texas. In central California the markets are accustomed to larger-sized berries than the Blakemore, and it is not likely to replace the Marshall there. Likewise, the Aroma, being of larger size, will probably not be displaced by the Blakemore in parts of Missouri,

Kentucky, and Illinois. However, the Blakemore is steadily winning its way in the larger markets. In Philadelphia, because of its keeping qualities and appearance, it is already out-selling the Missionary and the Klondike. It is also becoming more popular with the preservers and growers.

The Blakemore is a more vigorous plant maker than any other commercial variety and also withstands drought, hot weather, and other unfavorable conditions better than most other sorts. In fact, no variety will

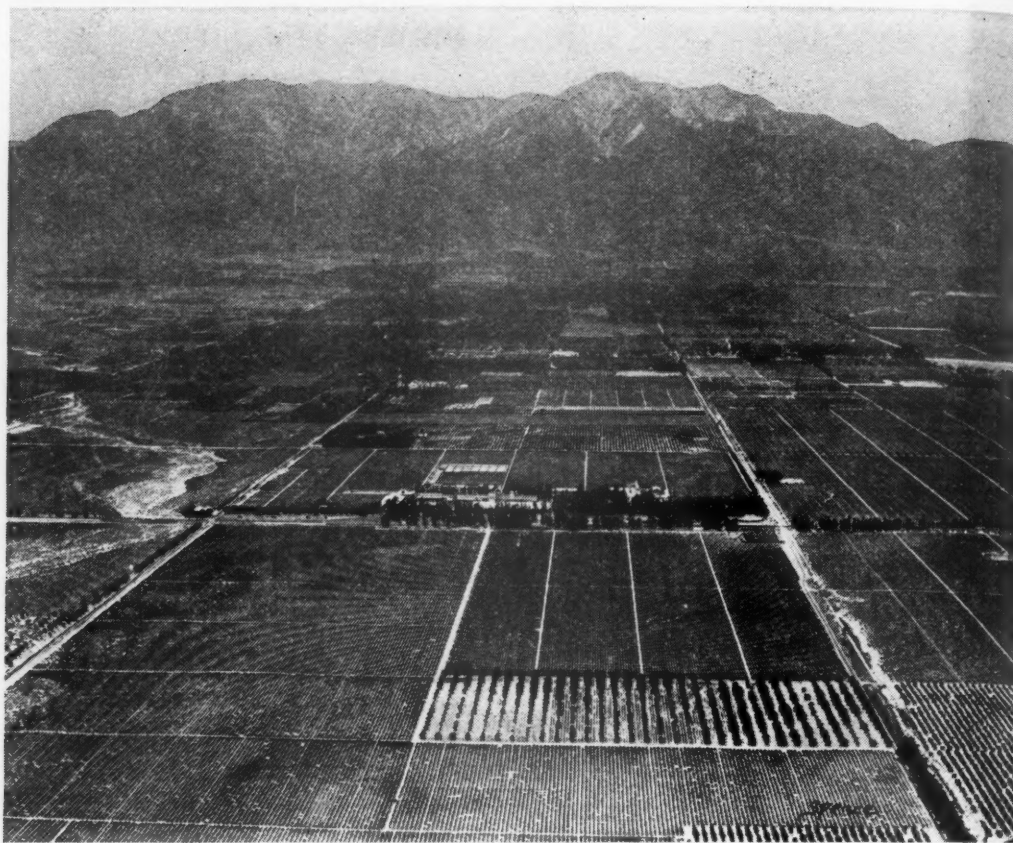
(Continued on page 24)



A plant of the Blakemore in North Carolina, showing the heavy crop produced by this variety.

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An extensive planting of wine grapes in California

Repeal Raises Question of Grape Varieties

By GUY TRAIL

THE return after 15 years to legal wine making in the United States has revived interest in the growing of wine grapes—distinct varieties fitted, in the main, for no other purpose. These varieties were largely discarded after the adoption of prohibition, hundreds of valuable acres having been grubbed up and the land utilized for the production of staple crops.

In certain sections of the country, wine making was highly specialized. So, too, was the variety question settled by the taste of the wine the grapes made and not the production per acre.

A typical district where wine making was once a major industry and where the variety question came in for painstaking study is the famous old town of Hermann, Missouri, famous because it was in reality a bit of the Rhine valley transplanted along the brown loam bluff lands of the Missouri River. A review of the varieties grown for the wineries of Hermann is timely; many will be replanted over wide areas. Missouri grape growers already are making plans to propagate several of the best wine grapes, feeling certain that they will be in demand.

It was in the Hermann district that Jacob Rommel and Nicholas Grein spent so many years in experimenting on distinct wine varieties and were so richly rewarded with Elvira, Etta, Missouri Reisling and Grein's Golden. These plant breeders were searching for hardy, disease-free sorts that would make a wine to equal that produced in Germany. And both succeeded. Elvira, originated about 1880, soon became widely popular as a white wine grape. Rommel himself handled it so expertly in blending that his white wine was a byword of excellence in the New York wine trade.

Rommel also developed Norton as a red wine grape supreme. Norton, although a Virginia grape, enjoyed little popularity until planted at Hermann. The astute old German growers soon discovered its real worth. This variety made a heavy, rich wine, reputed to be rich in iron, and found a ready market with the makers of tonics and patent medicines.

The Missouri Reisling of Nicholas Grein also was extremely popular. In the opinion of many grape growers, it will be planted again on a large scale, as wine making is revived.

Along with Norton's Virginia

Seedling, as it is commonly known, Cynthiana was largely grown. These two varieties are almost identical; some authorities contend they are one and the same. However, Cynthiana was sent to Hermann from Arkansas, where it was found growing wild. In many of the vineyards of this wine district Ives had a prominent place. Indeed, it was surpassed only by Norton for a heavy-bodied red wine.

Among the red grapes grown in Missouri, Catawba found most favor as a wine grape. Brighton was liked better than Delaware, the contention being that Delaware was not at its best under Missouri conditions.

Grape growers of Eastern America, who hope to profit by the return of wine making on a commercial scale, cannot compete with growers of Vinifera grapes, if they cling to such commonplace sorts as Concord. They will have to turn back to the old distinct wine varieties or plant the very newest sorts that have wine making possibilities. Missouri growers learned this truth back in 1870-80. They are going in for the old wine grape varieties and at the same time are trying all of the promising new ones that have been bred since.

THE ORCHARDIST, WOTTA MAN!

By JAMES SENTER BRAZELTON

WHEN you stop to think of it, an orchardist has to be a pretty smart man. If he is not smart to begin with, he will naturally get that way in the process of becoming an orchardist. An orchard man must of necessity be not only a jack of all trades but a jack of all sciences. He is much more than a "three-in-one" man, for the scope of his activities covers a wide range of subjects and he must be skilled along many lines.

A little knowledge of botany comes in handy, so that he may know how plant food elements in the soil are absorbed by the root hairs of his trees; how these food elements are carried by the sap up through the trunk and limbs of his trees by capillary tubes and how the leaves of his trees receive these elements as a factory or mill receives its raw material. He knows how this material is used by his leaves in the manufacture of starch and intricate plant foods which his trees use for growth and in the making of his apples. To know that this manufacturing process goes on in his leaves only in the presence of sunshine and that his leaves have breathing pores on their under sides, can help to make him not only a better orchardist but a broader-minded man as well.

Perhaps few orchardists ever think of themselves as pathologists but that is exactly what they are, for every tree that grows is subject to disease. Every orchard man is a doctor to his trees, a diagnostician, if you please, for whenever a tree gets sick it is his business to find out first of all what is the matter with it.

Not all the entomologists are to be found in colleges and universities, for some of them wear overalls. To be an orchardist and not to know something about bugs and insects would be like a preacher not knowing his Bible. To know the complete life histories of the codling moth and curculio, these two and no more, should be sufficient grounds on which to award any fruit grower his sheepskin in entomology. The importance of bees as pollenizing agents is more and more coming to be realized, so now Mr. Orchard Man must add to his store of entomological lore some of the interesting facts about the habits of these beneficial insects.

A zoologist is one who knows animals. Friend Orchardist must be one, for no one knows better than he what depredations certain animals, classed as rodents, can do. When he sets out young trees he always remembers to put guards around them to protect them from rabbits. He scrapes the grass from around the base of his trees in the Fall, to keep field mice from girdling them, and he scatters poisoned grain after every snow storm. The groundhog he kills in whatever way he can.

Eggs, larvae and adults of many insects constitute the bill of fare of certain birds. These the orchard man likes to encourage. His best friends among the birds are the quails, hairy and downy woodpeckers, nuthatches, barn and bank swallows, the grossbeaks and many others. He likes to give protection to the barn owl for it lives principally on mice, rats and rabbits. "A bird-house in every tree," should be the slogan of every orchardist. Fewer codling moths would emerge each spring if our orchards were more thickly populated with birds. And, being something of a bird-man, it would not be far wrong to classify the orchardist as an ornithologist.

Although the apple grower knows nothing about valence and atomic weights, yet he must be something of a chemist. All the spray materials he uses are chemical com-

pounds and every batch of dope he mixes in the spray tank is a chemical solution. His orchard is his laboratory. He has to know his materials, too, for to mix wrong things together would mean disaster. When he gets a black sludge in the bottom of the tank he knows he has a precipitate that has resulted from a wrong combination. He is familiar with the chemical effect of certain sprays on foliage and fruit when applied under certain conditions of temperature and moisture. This he calls "spray burn." To know what arsenical residue and lead tolerance means is to know a little bit about chemistry. The orchardist also knows something of the chemistry of his soils, for not to know this would be to apply his fertilizer blindly.

Rain, frost, sleet, snow; these and many other weather conditions give concern to the man who raises apples. Every day in the year, season in and season out, he keeps an eye on the weather. Extremely low temperatures for days at a time cause winter killing. In the spring it is late frosts that worry him. All summer it is the possibility of hail. In August, when all is parched and dry, he watches the sky and prays for rain. What few scattering clouds he sees he knows are only empties coming back from Iowa. Just about picking time high winds come, and sometimes, almost over-night, put his whole Jonathan crop on the ground.

The thermometer is as essential to an orchard man as it is to a doctor. He watches it in the spring to determine the time for the first codling moth spray, for he knows that the first eggs are laid only after the temperature has reached 60°, at eight o'clock in the evening. Counting from this time to allow the eggs to hatch, he knows when the first spray should be on his trees. His thermometer tells him when it is no longer safe to use lime sulphur. He consults his hygrometer, which is an instrument for registering relative humidity, to determine when to use and when not to use Bordeaux. We could rightly call the orchard man a meteorologist, for this is what Uncle Sam calls his weather observers.

What college professor would not turn green with envy if he would but stop and contemplate the lowly orchard man and would consider all that he is and does? What man in any walk of life is any more versatile than he? But this is not all. He is far more than just a composite scientist. To be a good orchard man he must be a good mechanic as well, because sprayers, pumps, tractors and gasoline engines all have a habit of getting out of order. He must be something of an electrician, too, especially if electricity is used to pump spray water. There are times when he has to be a plumber. In common with all farmers, he is a veterinary and a blacksmith. He should be a good business man but some are not. Every orchardist should know something about bookkeeping, since there are accounts to keep, and he should know how to write a good business letter. If a man raises apples for a living he must sell them, so it is necessary that he be a good salesman.

Let the orchard man then dwell upon these things and think upon his own importance. In so doing he will put off that inferiority complex that so many seem to have and he will be able to stand before kings and even movie actors, without embarrassment. Realizing that he is a man among men, he will be able to mingle unashamed with college professors and bankers. He will think more of himself and others will think more of him.



A "Shearing" type of pruning with prune trees

TRENDS IN ORCHARDING— PRUNING

By J. H. GOURLEY

THERE are few phases of orcharding which have had more consideration than pruning. From earliest times some attempt has been made to modify the form of plants as well as to influence their fruiting habit. Those who have been identified with horticulture for as much as a quarter of a century have seen marked changes in "style" of pruning. Heavy pruning was introduced in the East about 25 years ago and it was justified on the basis that it would produce a sturdier trunk, increase the branch growth, and improve the quality of the fruit. This view has had a long influence and even today will be found prevailing in some sections, as illustrated in the plumb orchard here shown.

It required a considerable amount of experimental work to show that the effects of pruning were often an optical illusion. That any amount of pruning is a dwarfing process is now clearly understood. A few years ago the writer carried on some pruning work with peaches in a section where the concept prevailed that the trees should be severely pruned in order to adjust the size of tree to the soil conditions. As a result the trees were averaging hardly more than a bushel to the tree. When lighter pruning was practiced the yield was materially increased, due to a larger bearing surface. In such a district it would have been better if the pruning tools had been thrown away entirely for a couple or three years. To attack the problem from a soil-building program would be much more profitable.

How Much Pruning is Justified?

It seems to me that if there is any definite pruning trend in the East it

is to prune young trees of practically all kinds (including peaches) much lighter than formerly. This is one of the poignant reasons for delayed bearing of commercial crops. Frequently many of the young trees need no pruning at all but there is always the urge or temptation to do some cutting. Wood on the ground is evidence of work! Yet the old "rule of thumb" method called for cutting off a certain fraction of the growth each year until the tree had reached a certain age. I wonder just why.

Now with older trees the situation is somewhat different in that spraying and general quality of the fruit are to be considered. The general rule still holds that cutting away part of the tree will result in a tree of less total size, even though there is a longer season of growth of the stimulated parts.

At the Ohio Station there is a small block of Stayman Winesap and Baldwin trees which were planted in 1915. One lot has not been pruned since planting, another receives what we term "light, corrective pruning", and another heavy pruning. The trees are now 19 years old and show a striking difference in size. The unpruned ones are considerably larger in size and bearing surface although they are "thick", difficult to stray thoroughly and contain a good many shaded and hence unfruitful branches. The lightly pruned ones rank next in size and the heavily pruned ones are dwarfish in comparison with the first lot. Different pruning treatments have been applied to other plots but these three are sufficient for our consideration here.

The following abbreviated table shows the effects of various amounts of pruning upon the yield, size of fruit, and color, in the three plots. This shows that the highest yield has been obtained from the unpruned plot, exceeding the heavily pruned one by an average of 71 per cent. This is an enormous sacrifice in yield for any other advantage that may be gained. The treatment of the trees has been the same in all particulars except pruning. This difference may be greater than that obtained elsewhere or with other varieties but it has been fairly consistent throughout this experiment.

Effect of Pruning upon Yield, Size and Color of Fruits

Ohio Agricultural Experiment Station

| | Unpruned | Pruned lightly | Pruned heavily |
|----------------|----------|----------------|----------------|
| Total | B.* 8546 | 6111 | 5520 |
| Yield lbs. | S.* 6655 | 7635 | 3333 |
| Size | B. 77.5 | 80.6 | 80. |
| Above 3" diam. | | | |
| % 5-yr. av. | S. 67.7 | 89.6 | 91.2 |
| Color | B. 72.6 | 67.9 | 92.1 |
| Above 33 | | | |
| % red | S. 92.0 | 96.1 | 89.8 |

*B.=Baldwin, S.=Stayman Winesap.

The size, on the other hand is fairly proportional to the amount of pruning. The heavily pruned trees produced 24 per cent more apples having a diameter of 3 inches, or larger, than the unpruned ones. Size, of course, is not an unmixed blessing, for physiological break down is most serious in the largest specimens. The same thing is true with bitter pit or stipend, Jonathan spot, water core, and other physiological troubles. Whether the experiments are in Australia or America, the results on this point are the same. Often the demand for the largest apples is less than for medium sized ones. However, there seems little question that size has been affected.

Color is a matter of great importance, almost the limiting factor in some fruit sections. Here we find that Stayman Winesap has been affected to a much less degree than Baldwin. No doubt varieties are quite sensitive in this particular and, as mentioned later the variety question is important here as in practically all other cultural matters. To increase the solid red color from 72 to 92 per cent is no small item, but it was gained at the expense of yield.

This all means a certain compromise between tonnage and quality, and the individual grower must decide for himself what his market demands.

Pruning and Thinning

Both pruning and thinning remove potential fruit from the tree. One

(Continued on page 27)

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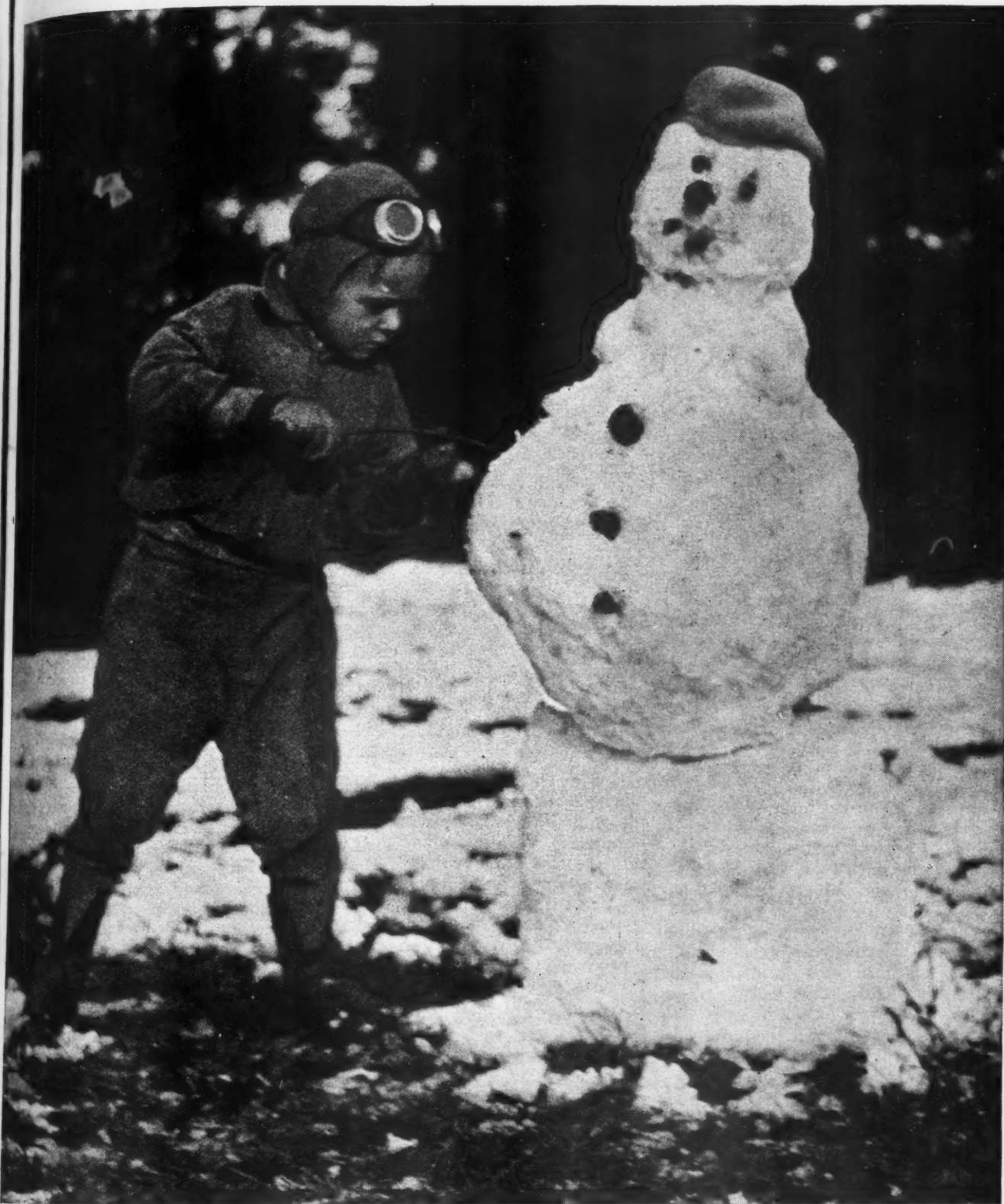
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NAME THIS PICTURE AND WIN \$5.00

Remember what fun it was when you made snow men? Bring back those memories now by trying to think of a name—a real prize winner—for the picture above. Suggest names that are different—as many as you wish. For the best title submitted the AMERICAN FRUIT GROWER will pay \$5.00. Suggest as many titles as you wish, but they must reach us on or before January 20. The winner will be announced in our February issue.

Attach This Coupon to List of Titles

Prize Title Editor, THE AMERICAN FRUIT GROWER, 1370 Ontario Street, Cleveland, Ohio.

Name

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City State.....

JANUARY, 1934

AMERICAN FRUIT GROWER

Page 15

RAMBLES OF A HORTICULTURIST

By JOHN T. BREGGER

EVERY fruit grower has found out what it is to learn from his own experience, and there are very few who have not learned to profit from the experiences of others. It may be your own neighbor, and it may be a fruit grower in another state a thousand miles away, whom you read about, but such an experience often supplies you with a new idea which can be put into immediate practice with success.

In my personal orchard experience, gained to a great degree in Extension work, I find it is a rare occasion, indeed, when I do not obtain at least one new and valuable addition to my knowledge of fruit production or marketing practices when I visit another orchard for the first time. It may be through failure, rather than success, that the new lesson is made plain, but it is, nevertheless, there.

When fruit growers get together in small or large groups, the exchange of personal experiences is equally valuable and is the main reason for the great popularity and success of the various neighborhood, state, and national horticultural groups or societies. These societies in many cases have sponsored tours during the summer season, when the orchard practices talked about at winter meetings are seen in actual operation, or their results can be noted.

Fortunately, I have had the opportunity of seeing fruit growing first-hand under widely different geographical conditions. These contacts began in 1917, when I first visited the West, and during the past 16 years I have had the privilege of visiting 46 out of the 48 states, as well as Canada and Alaska, in most of these states having first-hand contacts with some phase of commercial fruit growing. Under present-day conditions, when methods of production and marketing have become more and more standardized throughout the country, experimental evidence and successful orchard practices are more easily transferred and adopted from one state to the other than ever before. Many of our important fruit growing problems and

practices at the present time are common throughout the country. There is not only an opportunity of learning much from a member of our own occupation in another state or district, but there is an equal need for a better understanding of these mutual problems, so as to secure their solution through more and greater co-operation.

First-hand information is always the most accurate, when observations are accurately made. For this reason, it is my intention to make these contacts whenever possible, to see fruit growing conditions and practices in every important section, and meet as many of the successful growers as time and distance will permit, thereby giving to our readers valuable hints, suggestions, and advice that will not only be of interest, but will be applicable to their own fruit growing problems.

In order not to begin these "Rambles" too far back, we will start with the summer of 1933. Now and then, however, I will draw upon observations of less recent contacts of another season. Not always does the most recent observation give the best lesson, as our progress often comes in waves and we occasionally drop a practice which years afterwards fits in with present needs or conditions.

I had occasion during 1933 to visit orchards in about 15 eastern and midwestern states. One naturally heard and saw more spraying during this period of the year than any other one orchard practice. The word "codling moth" was on every orchard man's lips from one end of the country to the other. One large section of the United States was hit by an epidemic of apple scab such as has not been seen in years. The success and failure of different spray materials was evident everywhere, though far more evident was the failure of different fruit growers to obtain success with the same spray material. The individual or "man factor" has always been, and probably will be forever, the main difference between a successful and an unsuccessful orchardist—and perhaps it is

true in every other vocation or profession.

Let us begin our travels with the writer's home state, Michigan. It was here on the old home farm that my orchard experiences began in the year of 1900. What is now the main block of orchard on the home farm was planted that year, and there is at least one humorous incident connected with that planting which will bear telling. In those days Hubberston was still one of the standard apple varieties being planted, and my father planted what he supposed was a block of that variety. Not until 1912, or 12 years later, did we discover the trees were not Hubberston at all, but Northern Spy. This is one case, of course, where a nurseryman made a mistake in the right direction, although the incident stands out as typical of the long time it takes for Spy trees to come into bearing, particularly if further discouraged from fruiting by severe pruning while the trees are young.

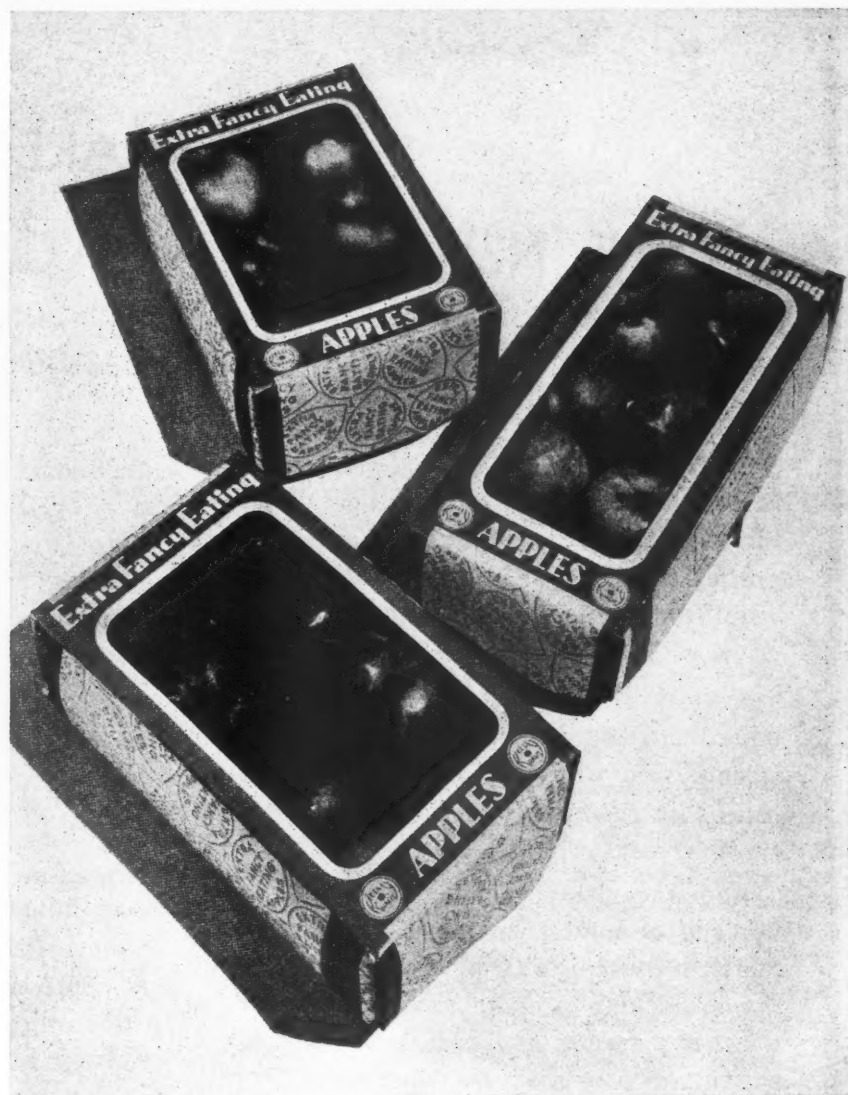
This particular orchard, containing trees of Duchess, Jonathan and Grimes Golden, in addition to Northern Spy, has taught and is teaching many other lessons of variety, pruning, soil management, and other factors so important in determining the possibilities of success or failure to the owner. There is a splendid example here of what a heavy sod can do in absorbing applications of nitrogen fertilizer and preventing the trees from benefiting to the extent that they might. There is the example also of a variety like Jonathan becoming partially biennial in bearing habit, due to a slowing down in vegetative growth. There is the splitting of some trees, due to incorrect training and pruning during the early formative period.

On the other hand, there are examples of the more desirable features which, after all, have predominated and made the orchard profitable over a period of years. Probably the most important has to do with the original selection of varieties and site. Not every orchard planted as far back as 1900 has been of the varieties which are in demand and considered standard for a particular state or market location today. Good air and soil drainage, and a deep fertile soil, are important factors for ultimate success. A good stand and a strong growth of trees is the first requirement toward heavy crops of fruit. Adequate pollination follows, and from there on, we must think of seasonal orchard practices which govern the regularity, quantity and quality of crops.

Easy to buy
because attrac-
tive and easy
to carry home

The APPLE of the Consumer's EYE

By DEAN HALLIDAY



THE art of packaging has already increased the sales of celery, rhubarb, mushrooms, limes, asparagus, cherries, strawberries and blueberries. It can do the same for apples. As a matter of fact, it does not require as much ingenuity to package apples attractively as it does any one of the aforementioned perishable products. Apples, the "King of Fruits," are as attractive as any fruit grown. All that apples of quality need to sell themselves is the opportunity to display their charms. Modern packaging combines the opportunity for display, together with convenience for carrying home.

Study the handy package shown in the accompanying illustration. It is as different from the old bushel basket as the modern, streamlined automobile is from the "horseless carriage," of thirty years ago. This type of package sells apples because it has "eye appeal" and being compact affords convenience for the "cash and carry" customer.

Two New York state growers are using this package of 12 apples with amazing success. One is the Hudson Valley Fruit Corporation of Livingston, N. Y., the other the Hill-E-Here Orchard of Niverville.

A package of this type appeals to

the retailer as well as to the consumer. It is welcomed by the dealer because it permits him to build attractive, eye appealing displays. He naturally places the packaged product on his counter or display racks instead of underfoot on the floor. He can make sales faster because the fruit is handled as a unit. And since packaged produce is immediately classed as better produce by the buyer—better prices are generally paid.

There are also other advantages to packaged produce that appeal to the retailer. Storage is easier when packages are used. Inventory can be taken faster, and since the package protects as well as displays the fruit, loss from bruising and spoilage is reduced. All these things create good will, which in turn leads the dealer to push the packaged product.

The modern package also permits attractive printing of brand and grower's name, which in turn leads to all important identification of a particular brand and thus encourages repeat sales.

Listen in as the modern woman shopper does her buying. What do you hear? "I'll take a package of this . . . and a package of that!" Your own wife says the same thing as she goes about her buying. This is true because very few commodities today are deprived of the sales advantages of packaging. Why, then, should we send apples to the retail market burdened by the archaic barrel or bushel basket? The ultimate consumer of today would be as apt to buy a buggy whip as he would a barrel of apples.

The grower who is proud of the fruit he produces should not be content to send it to market without a name or the sales benefit of attractive, efficient, paperboard containers—especially when the moderate cost of these modern packages can be repaid many times by the increased demand for the branded produce and higher returns. Packaging, in other words, enables the grower to command a larger share of the retail selling price of his fruit.

LET'S MAKE THE NEW YEAR A GLORIOUS ONE

Says BENJAMIN WALLACE DOUGLASS

JANUARY! A new year; a new road; a new start! We always get a thrill out of anything new and a new year should give us the greatest thrill of all. It is as though we were handed a new lease of life—what will we do with it?

First of all, it seems to me, we should cast up accounts and discover if we can, what we accomplished with the last slice of life we had—with the twelve glorious months that are now past.

And when I say "cast up accounts" I am thinking of more than figures, thinking of more than *making* a living, I am thinking of *living*, thinking of all those intangible benefits that a farmer gets free, gratis and for nothing and on which no ingenious tax collector can levy a single dime.

In a financial way, most fruit growers have weathered the economic unpleasantness far better than have their brother farmers or their city cousins. While some orchards are "in the red" most of them have managed to pay a small profit. I know of no cared-for orchard that has been sold for taxes and of none lost through mortgage foreclosure.

Most of us seem to have made a living, but how much have we lived? How many of those intangible benefits have we collected for ourselves and our families? Are the last twelve months a blank save for the few figures we need in calculating our profit or loss in money?

When an artist friend built his house in our Brown County hills, he carved above his

fireplace the words, "Each day I take off my hat to the beauty of the world."

How fine it would be for all of us to keep ourselves constantly alive to the beauty of the world around us. How much it would add to the joy of living if we were always alert to every beautiful thing in this lovely world in which we work.

Suppose we resolve to collect a heavy toll of this fine new year ahead of us, so that none of its joy and beauty shall escape. Let us learn to appreciate the grace and dignity of an old apple tree, standing in the snow at the end of a gray winter's day. Let us know and appreciate that first flush of green on the willows along the creek and let us absorb some of the calm of a summer day that broods upon the hills like a benediction.

If storms come, as they will, may we not gather some of their strength into ourselves?

In all our human relationships too, let us try to get the utmost out of these next twelve months. Most folks have something good about them—they really have. Suppose we look for that good and try to appreciate it. Let us cultivate a spirit of tolerance and charity and good-will toward all our fellows. If we do, I know that in some strange fashion we will absorb into our own lives all that is good and fine in the lives of those with whom we come in contact.

Let us go on making a living, by all means, but let us not forget to *live* and when another January comes, let us be able to look back and say, even though the ledger be all in red, "It has been a glorious year."

AMERICAN POMOLOGY

*A Page Conducted in the Interests of the
American Pomological Society*

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Objectives for 1934

The following summary of this year's aims and objects of the A.P.S. indicates the scope of this organization's 1934 program and its importance to every American fruit grower.

1. Restudy problems in nomenclature.
 2. Plan for bureau of registration for new fruits.
 3. Extend service features of the organization with special reference to:
 - (a) promotion of movements to recover and improve export market situation.
 - (b) secure cooperation between federal and state authorities in administering spray residue regulations.
 4. Publish proceedings of 1933 meeting.
 5. Promote and conduct outstanding convention in 1934.
 6. Supply a page of interesting news each month in the "American Fruit Grower."
 7. Continue to build up financial status of the organization.
- B. S. Pickett, President.

Resolutions Adopted at 49th Convention

WHEREAS, this the 49th Convention of the American Pomological Society, in its 85th year of age and having served the fruit interests of the American Continent in a helpful manner, do hereby resolve the following:

2nd: We recognize that the Agricultural Adjustment Act will have direct and indirect influence for the betterment of the fruit interests of this country and that we extend to the Secretary of Agriculture, Henry A. Wallace, our sincere and utmost confidence in his ability to carry out his part of the Administration's Recovery Program, and that we will do our part in so far as it is possible for us to do so, in our co-operating with him in carrying out this policy.

3rd: The American Pomological Society takes favorable notice of the recent ruling of the United States Department of Agriculture, placing the lead tolerance in spray residues at .019 grains per pound of fruit. The Society appreciates the evidence of sympathetic understanding of the entire problem involved, but it disagrees with the necessity of making any reduction whatever in the tolerance standard in the absence of evidence that the higher tolerance is harmful to human health. However, it accepts the ruling in the gracious spirit in which it believes it is offered. The Society will so notify its members and affiliations throughout the United States.

4th: That the Government be asked to co-operate with the various fruit agencies such as the American Pomological Society, Eastern Apple Growers Council, International Apple Association, and others, in the forming of future regulations which have a direct bearing on the welfare of the fruit industry, such as did the 1933 spray residue regulation which caused untold loss this year to a hundred million dollar industry.

We feel that no group of farming people are more interested in the public welfare than the fruit growers, or are more willing or reasonable in co-operating for the general good of all. We therefore ask the Secretary of Agriculture to request regulatory officers to co-operate more directly and sympathetically with the fruit growers in such cases.

5th: That any recognized official analysis of representative samples of fruit by state or federal authority should be accepted as final and binding.

Official Organ of Society

With this issue, the American Fruit Grower becomes the official news organ of the American Pomological Society. The officers of the society in executive session December 13, at Springfield, Ill., made this arrangement, and are happy to announce to the readers of the American Fruit Grower and to the membership of the A.P.S. that the society has been given a page in this magazine which will contain each month timely items of interest to our membership and to the readers of the American Fruit Grower. By this most effective means, the A.P.S. will reach all of the fruit interests of the country in every state and in so doing bring the work of the society and what it stands for to you.

H. L. Lantz, Secretary.

6th: That the American Pomological Society requests Experiment Stations and other competent agencies to investigate the possibility of injury to human health as a result of the consumption of apples and pears carrying lead, arsenic, flourine, or other spray residues, in amounts where they would be consumed in the normal diet.

Respectfully submitted,
(Resolutions Committee)

R. S. Herrick, Des Moines, Iowa
Paul Stark, Louisiana, Mo.
W. S. Perrine, Centralia, Ill.

JOIN THE AMERICAN NOW! POMOLOGICAL SOCIETY

Here's my \$1.25 for which I am to receive all the privileges of annual membership, including Report of the 49th Convention and all other announcements and Service Reports of the Society.

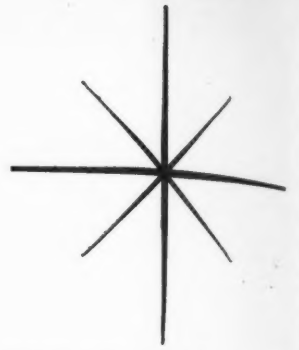
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Fill out blank and mail with remittance to—H. L. Lantz, Secretary, American Pomological Society, Ames, Iowa; or American Fruit Grower, Cleveland, O.

STATE HORTICULTURAL NEWS



Penn. Has Diamond Anniversary

THE 75th Anniversary program of the Pennsylvania State Horticultural Ass'n will be held in Harrisburg in connection with the Farm Products Show, January 17 to 18. Beginning at 10 A. M. the first day with the president's address, secretary's and committee reports, the program will cover numerous production and marketing problems of great significance to fruit growers of Pennsylvania and surrounding territory.

The guest speakers and their subjects include Dr. J. H. Gourley, Chief in Horticulture, Ohio State University and Experiment Station, on "Some Recent Trends in American Orcharding"; F. Z. Hartzell, Associate in Research, New York State Experiment Station, on "Tar Distillate Emulsions for the Control of Rosy Aphis and other Insects"; and J. T. Bregger, Editor, AMERICAN FRUIT GROWER, on "Some Northwestern Orchard Lessons for the East." The annual horticultural banquet will be held at the Woolworth cafeteria the evening of January 17, the banquet speaker being Dr. S. W. Fletcher of the State College on "The History of the State Horticultural Association."

Other subjects and speakers on the two day program follow: "Our Experience with the Farm Type Cold Storage," F. N. Fagan, State College; "New Ideas in Insect Suppression," H. E. Hodgkiss, State College; "The Result of the Entomologist in the Pennsylvania Department of Agriculture to the State Horticultural Association," T. L. Guyton, Harrisburg; "Results of Codling Moth Control Experiments in 1933," H. N. Worthley, State College; "The Pennsylvania Fruit Disease Situation in 1933," R. S. Kirby, State College; "Some Fruit Disease Observations," H. W. Thurston, State College; "Making the Most of the Rainfall in the Orchard," R. D. Anthony, State College, and "Some Ohio Orchard Observations," R. H. Suds, State College.

Apple prices are very satisfactory to Pennsylvania growers having U. S. No. 1 grade. One grower washed his fruit solely for advertising and is getting the jump on his competitors. Others are doing likewise this next year.

Much interest is being shown in tar oil sprays in all districts. An increasingly large number of growers are using them.

R. H. SUDS, Sec'y.

New York Plans Big Program

THE trend of thought among New York fruit growers is reflected in the programs of the New York State Horticultural Society. Two meetings have been scheduled for January, the annual meeting at Rochester and the eastern meeting at Kingston. Dates for Rochester are Jan. 10 to 12 and at Kingston Jan. 24 to 26. Codling

moth control, elimination of old orchards, and packages are given prominent places on both programs.

A forum on codling moth will be conducted at both meetings with Prof. P. J. Parrott of the Geneva Experiment Station in charge. For the Western New York meeting at Rochester, the principal speaker on this subject will be Dr. R. L. Webster, Entomologist at the Washington State College. His subject will be "How We Combat Codling Moth in the State of Washington." Dr. Webster is recognized as one of the foremost authorities in the country on the subject.

At both meetings the discussion of fruit containers will be in charge of A. B. Buchholz of Hudson, Columbia County agricultural agent. Speakers are expected to include H. A. Spillman of the United States Department of Agriculture on "Laws Relative to Standardization of Fruit Packages." Others on the program are Lou Blachly of New York, "Attitude of the Trade Toward Crates"; E. Stuart Hubbard of Poughkeepsie, "Crates Versus Baskets," and F. Palmer Hart of Red Hook, "An Approved Apple Crate."

Western New York has a particular problem in old orchards. There has been some complaint that neglected orchards are a menace to surrounding orchards. Some growers have urged that steps be taken to eliminate these old orchards either at public expense or at the expense of the owners. At Rochester there will be a forum on the subject in charge of Ernest R. Clarke of Spencerport.

E. F. Brown of New York, secretary of the Consumers' Information Service of the State Department of Agriculture and Markets, will talk at both meetings on promotion for the sale of fruit.

Mass. Eliminates "Menace" Trees

MASSACHUSETTS apple growers in common with those of the rest of New England have during the past season been co-operating with the Extension Services in a campaign to remove "boarder trees." This campaign has taken the line of cutting down trees of unprofitable varieties; cutting out filler trees; removing old, neglected trees in pastures and on roadsides and along division walls and fences.

More than 10,000 such "menace" trees were demolished and many fillers in addition. This project has been of greatest value in bringing growers to a realization of this problem and causing them to welcome the C. W. A. plan now in operation and which was inaugurated November 15.

The Massachusetts Fruit Grower Annual Meeting, held in Worcester, January 3, 4 and 5, 1934, had the finest program ever presented. Most of those appearing at this meeting were from outside New England, and brought to Massachusetts growers the views and opinions of fellow fruit growers in other territories.

AMERICAN FRUIT GROWER

Massachusetts growers rejoice with those of other areas in learning that spray residue tolerances are not to be materially lowered for the coming season. Much concern was felt over the possibility that these would be materially lowered.

Massachusetts apple growers were invited to attend the Friday, December 29, meeting of the American Association of Economic Entomologists at Cambridge and listen in on a symposium on "Spray Residue Removal." An extremely fine opportunity availed of by a large group.

W. R. COLE, Sec'y.

Indiana Annual Program

THE annual meeting of the Indiana Horticultural Society will be held at Purdue, January 10 and 11, in connection with the Annual Agricultural Conference.

Dr. J. R. Magness, Principal Pomologist, U. S. Department of Agriculture, is on the program twice, once to discuss "Drought Effects in Eastern Apple Orchards" and again on "Economic and Effect in Orchard Soil Management." Dr. Magness is an authority on orchard soil moisture problems.

Results of the 1933 codling moth studies will be handled by Prof. J. J. Davis, G. E. Marshall, both of Purdue; R. F. Sazama, U. S. D. A., and Russell Dorman, California Spray Chemical Company.

Indiana has a set-up in its Food and Drug Division whereby fruit growers may send in samples of fruit for analysis at very little cost. Mr. Frank J. Koehne is connected with this department and will discuss how it can be used by our growers.

Prof. C. L. Burkholder and O. W. Ford, Purdue, have analyses of hundreds of apple residue samples. They have information on various spray schedules and how much lead and arsenic is left after different methods of washing. If every grower knew the load of residue his fruit carries at picking time and at different stages of development, he would be in a better position to meet the tolerance.

Prof. C. E. Baker, Purdue, will discuss "Moisture and Nitrates in Lafayette Orchard Soils."

The annual banquet is always of interest to our growers. Lieutenant Governor M. Clifford Townsend will be the principal speaker and anybody who has not heard the Mr. Townsend has something in store.

K. I. FAWCETT, Sec'y.

Ohio Will Hear Auchter

WE are completing the program for our annual winter meeting in Columbus, January 29 to February 1st, and have been fortunate to secure several prominent out-of-state speakers—among them, E. C. Auchter, Principal Horticulturist, U. S. D. A.; W. C. Dutton, Michigan Agricultural College, and W. S. Hough, Entomologist and

Spray Specialist, Winchester, Virginia. In addition, there is a splendid list of speakers from our own state and Society. A joint program is being planned with the Ohio Vegetable Growers Association for the afternoon of January 31st. At this session, general matters, such as Farm Credit Administration Financing Policies and the Relation of the A. A. A. Program to the Fruit and Vegetable Growers, will be presented by speakers from these institutions. Demonstrations will be given of apples and potato grading during the week.

This year the Horticultural Students of Ohio State University are sponsoring the 22nd Annual Potato and Apple Show in connection with Farmers' Week which is to be held January 29 to February 2. This is the only state-wide winter fruit show held in Ohio. Valuable prizes will be given for both plates and trays of apples of the following varieties: Delicious, Rome Beauty, Jonathan, Stayman, Grimes Golden, Baldwin, R. I. Greening, McIntosh, Golden Delicious, Northern Spy, Starking, Red Rome or Gallia.

W. H. Matthews, Salem, has just been notified of his appointment as Orchard Appraiser for the Federal Land Bank, Louisville, Kentucky. Those submitting applications for orchard loans will be requested to prepare maps of their orchard properties, showing the locations of the different blocks of trees and designating, by location, varieties and age of trees. There should also be a tabulation of total yields for each of the past five years, if the orchard is of bearing age during that period, or the same information for a shorter period if the orchard is just coming into bearing. An estimate of the percentage of U. S. No. 1 apples, produced during these years, would be considered desirable supplementary information. Applicants for Federal Land Bank Loans will save much time if clouds on the title are cleared up. It is suggested that early applications may receive most favorable consideration.

A Production Credit Corporation will soon be organized in the Federal Land Bank district serving Ohio, with headquarters at Louisville. Ten or more farmers may organize local Production Credit Associations following a plan or organization of the Production Credit Corporation. The object of this corporation is to make production loans. This plan may be helpful in securing production credit to leading fruit growers. Those interested in detailed information on the plan can write the Farm Credit Administration, Washington, D. C., for their various circulars on "Production Credit Associations." Arrangements are being made to have this development discussed at our winter meeting.

F. H. BEACH, Sec'y.

Michigan Holds Record Meeting

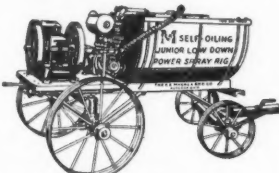
THE annual meeting of the Michigan State Horticultural Society just closed was probably the banner meeting of its 64 years. Everything conspired to make it so. Held in conjunction with the Michigan Farm Show, the meetings of the Farm Machinery Ass'n. and the Michigan Cannery Ass'n., with good weather and the finest accommodations ever enjoyed in the matter of quarters, the programs drew a steady attendance of around 1000 men and women fruit growers.

The program with its galaxy of scientific lecturers constituted a liberal education during its six sessions on matters appertaining to fruit growing. These lecturers ran the whole gamut from the selection of

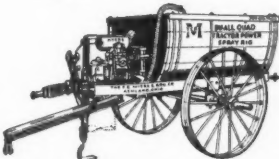
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the orchard site, through the matters of soil management, moisture control, cover crops, spraying, pruning, thinning, control of plant disease and insect and rodent pest especially codling and berry moth; new varieties and use of by-products such as sterile and filtered cider; marketing including a sharp rap at legislation tending to cut out the independent trucker; engineering, especially along the line of the advantages and problems connected with the use of the power take-off in spraying; reports on results on the use of new ingredients such as summer oil and nicotine, and calcium arsenate.

A talk by Professor H. H. Musselman on, "The Power Take-Off and Rubber Tires in Orchard Work," was well received and particularly the experience of various growers that took part in the discussion following this talk. Also the talk by Glenn L. Ricks, Michigan State College, "Pruning to Reduce the Number of Small Apples," is the type of talk that does growers a lot of good. R. D. Anthony's talk on, "Twenty-five Years of Orchard Fertility Studies," along with those by J. R. Magness on, "Moisture Relations in the Orchard" and "Factors Affecting the Biennial Bearing of Apple Trees," were very well received. The information presented by Mr. Anthony will probably influence orchard cultural practices in Michigan to a large degree.

H. D. HOOTMAN, Sec'y.

Iowa Delegation Attends A. P. S.

THE Iowa State Horticultural Society and several of its affiliated societies held their meetings at Ames, November 16, 17 and 18. Around 300 people attended these meetings. The florists staged what was called a Florists Style Show, Friday evening, November 17 in Agricultural Assembly, Iowa State College. There were about 1100 people who viewed this flower style show. One of the outstanding features of the show was the bridal bouquet designed by John Bryant of the Floral Department, Younker Brothers, Des Moines, Iowa. Instead of having pendants made of ribbons, as is usually the case, these were made of flowers and made quite a striking effect.

A dozen or more of our fruit growers attended the American Pomological Society meetings held at Springfield, Illinois, December 13, 14 and 15. Those who attended were well paid for making the trip. The latest information on the control of codling moth, apple scab, washing for spray residue and other items of vital interest to the fruit growers were discussed. This meeting was held in conjunction with the Illinois State Horticultural Society. The man who made the longest trip from Iowa to this meeting was Mr. C. H. Larison, Mondamin, Harrison County. This County is one of the leading producers of apples in

the State of Iowa. Its leading apple variety is the Jonathon. This variety grows almost to perfection in Harrison County.

So far the winter in Iowa has been quite mild, especially for the southern half of the State and it is believed that little or no damage has been done to fruit of any kind.

We are glad to report that the Iowa Fruit Growers' Association has made arrangements with the American Fruit Grower whereby every member will receive a copy of this worth while fruit paper.

R. S. HERRICK, Sec'y.

Annual Assemblage in W. Va.

THE Annual Assemblage of West Virginia growers splits February almost exactly in the middle—February 14 and 15. It will be at Martinsburg, in the Eastern Panhandle; 85 miles from Washington or 2,600 miles from Washington, depending on whether you are thinking about the Capitol of the U. S. or the state made famous by the feud between Yakima and Wenatchee.

From the top crotch of the highest apple tree on the peak of old Apple Pie Ridge, we send out our invitation to you to come to our gathering; and the lush river-bottoms of Shenandoah Valley, "granary of the Confederacy," echo the sound of welcome to Martinsburg.

The secretary of this society is not different from other secretaries. With just about expense money enough to get a barrel of apples over the Polish tariff wall, he is trying to put on a convention that reads, looks and listens like a conference of the world's dictators. But that has always been the case. And since we have

more experience this year, it ought to be a better one.

Time out while we pay tribute to those who have risen to leadership in fruit-growing, either as practical bark orchardists or as scientific experimenters. No group on earth will travel so far, undergo so much discomfort, lose so much time, and charge so little for it as fruit-growers when importuned to tell their competitors how they have beaten said competitors at one angle or another of the Apple Game. The perfect frankness and candor of growers among themselves is one reason why the Apple Game is the fascinating thing it is;—and why it has advanced as far as it has.

Sorry to add that we cannot say the same for the other branches of the Game;—the salesmen and the bankers. Both prefer secrecy; and in consequence, both are being investigated. We have tried hard to get good apple salesmen to talk frankly before a convention; and equally hard with bankers. Seldom have we succeeded with the salesmen; never with the bankers. If any one knows of a good, upstanding, rough-and-ready speaker in either line, willing to come for excursion expenses, I would appreciate your writing me at Martinsburg.

We are lining up now what we hope will result in a galaxy of stars never equalled since the time Adam and Eve held the first horticultural convention. We hope to have President Roosevelt for our banquet speaker, at the best; or Huey Long at the worst. For the rest of the two days we will have speakers with punch, pep, personality and persuasiveness to tell us what is wrong with what and why, in apple

planting, growing, spraying, check-stub book-keeping, orchard finance; what in-breeding is doing to the codling moth; and the difference between a banded orchard and an abandoned orchard. And if you don't like the speakers, you can go down stairs to the exhibit hall and do whatever you darn please. So come up and see us sometime about February 14-15.

CARROLL R. MILLER, Sec'y.

Vermont Starts Pest Clean-Up

THE officers of the Vermont State Horticultural Society realizing the importance of eliminating pest bearing trees in the vicinity of commercial orchards and the need of relieving the non-employment situation in the state, have put in a request for \$87,000 to be used in clean-up campaign work in the State of Vermont. If the request is approved, an effort will be made to cut wild cherry trees which harbor tent caterpillars, wild and uncultivated plums which harbor black knot, and uncared for apple trees where apple maggot and codling moth multiply in great abundance.

All of these things constitute a menace and add to the burden of fruit growers in the State.

M. B. CUMMINGS, Sec'y.

Washington Growers Urge Removal of Neglected Orchards

THE Washington State Horticultural Association held its annual meeting last month in Yakima with a large group of fruit growers in attendance. Wenatchee has already challenged Yakima in an attendance race for next year's meeting to be held at Pullman, Washington. This change of location breaks the precedent of many years of holding these meetings alternately at the former two cities. Prof. O. M. Morris of the State College of Washington has been chosen president for next year; F. E. DeSelle of Wenatchee, first vice president; A. L. Strausz of Yakima, second vice president. C. L. Vincent succeeds himself as Sec'y-Treas.

The announcement by Dean Johnson of Washington State College that further support of experiment work in the Wenatchee district could not be given by the college for lack of funds led to the appointment of a committee to seek a state appropriation under which research work in orchard pest control and spray residue removal could be continued in the Wenatchee district.

A warning was issued by the federal entomologist, Dr. E. J. Newcomer, that the apple producing districts of Washington face the worst situation in many years from the standpoint of codling moth infestation. He urged the use of chemically treated bands and other devices for catching worms before the spraying program begins, as the most economical and effective methods of control.

Several important resolutions were adopted by the association, one asking for a lead tolerance not lower than three parts in a million and an industrial processing plan of residue regulation to replace the present expensive analytical method. Sampling at the point of origin was endorsed, and the industry pledged to continue furnishing washed fruit to the domestic and foreign markets.

Another resolution asked a reduction of the transcontinental freight rate on apples to \$1.00 per cwt. An appropriation was urged for an exhibit to be placed at the

(Continued on page 25)



NuREXFORM

The Improved Arsenate of Lead

Remains in Suspension
Mixes Readily with Lime Sulphur
Won't Clog Screens or Nozzles



FREE

A valuable spray and dust schedule sent you upon request.

Remains in suspension—This assures all Arsenate of Lead getting onto the foliage and fruit as none settles to the bottom of the tank to be scraped out as waste.

Spreads uniformly—NuREXFORM provides an even spread over foliage and fruit. No unprotected gaps are left where the chewing insects may attack.

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"SAME TO YOU"

Says MARY LEE ADAMS

THIS is the month in which we cheerily shout "Same to you!" in full confidence that our friends are wishing us a Happy New Year. Here, on the orchard's women's special page, we express this wish very heartily, and assure them it is our hope that every page of the AMERICAN FRUIT GROWER may further the well-being of our readers by useful information, helpful suggestion and unfeigned interest in their problems and pleasures.

Every woman hopes in her heart that 1934 may bring more joys, fewer anxieties and heart-aches, than the years that are passed, which have been filled for many with what seemed unbearable trials and disappointments. But these have been borne somehow, and the brave souls, who faced every difficulty, have come through their troubles spiritually enriched.

You may see this in one after another orchard home. They have found that a little, shared with those who have less, is sweet. The joy of service has been theirs. Neighborhoods have grown more neighborly, as they were meant to be.

Now, with the whirl of the wings of returning prosperity sounding in our ears, and in our hearts the lively hope that we may not be passed by, we can dream of personal happiness. This may sound selfish but it is not. Every good wife and mother knows that no individual pleasure holds any joy for her unless she has the assurance that all is well with the dear ones under her roof. When we see a truly happy orchard woman, we may safely assume that hers is a loving and contented family and—"Of such is the kingdom of Heaven."

In this issue, Mary Lee Adams is giving to the women readers of American Fruit Grower another message which is worthy of thoughtful consideration. Writing in her orchard home on the east slope of the Blue Ridge Mountains in Virginia, and in one of the most famous apple districts of the whole world, Mrs. Adams knows first hand the life and problems of the orchard woman. In this realm, as in our departments for fruit growers, we are glad to receive questions and comments. Mary Lee Adams will welcome at any time a letter from any of our women readers addressed to this department.

—The Editor.

In Miami Beach its

The Fleetwood

The Fleetwood, one of the finest and most exclusive hotels in Miami Beach opens January first for the winter season of 1934 as a DeWitt Operated Hotel. To guests of other DeWitt Operated Hotels, which include the Hollenden, Cleveland; the La Salle, Chicago; the Neil House, Columbus, and the Mayflower, Akron, this is an assurance of the finest in food and hotel service. DeWitt Operated Hotels rank with the world's best in comfortable, well furnished rooms, courteous yet unobtrusive service and good food.

Only the finest of food, "the cream of the markets" is purchased and it is carefully prepared by competent chefs and faultlessly served, at reasonable prices.

Those who contemplate a visit to Miami Beach, either for a short stay or for the season, have the personal assurance of Theo. DeWitt that the Fleetwood will be the finest spot in Miami Beach this coming winter season. All rooms are outside rooms, with plenty of ventilation overlooking beautiful Biscayne Bay, with the city of Miami in the distance, in one direction, and the Atlantic Ocean in the other.

The Fleetwood has every conceivable comfort and convenience. With ocean bathing, warmed by the Gulf Stream, just off shore, a choice of seven fine golf courses, fishing, boating and other sports, both horse and dog racing, polo, tennis, etc., every desire of the guest for entertainment may be gratified.

Arrangements may be made at the desk for fishing and boating trips. For those who wish to avail themselves of ocean bathing, the Fleetwood maintains a private bus service between the hotel and ocean beach, operating on a thirty-minute schedule, with no charge to the guest for this service.

There is a Private Dock for yachts and motor boats on the bay side of the hotel and there is ample parking facilities for automobiles.

The best people of America choose Miami Beach for the winter season and the most discriminating choose the Fleetwood as their home while there.

Opening January 1st, we suggest early reservations.

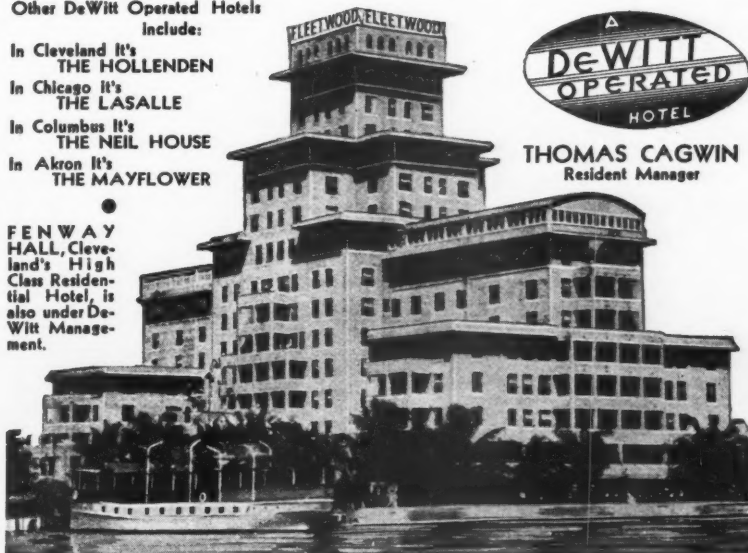
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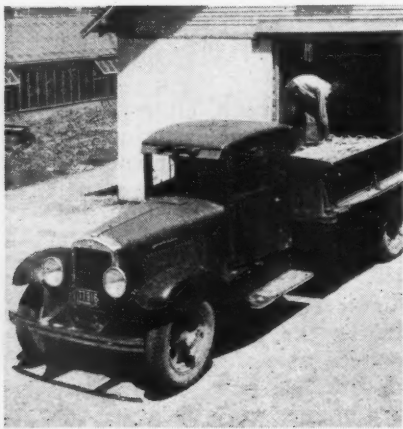
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What a remarkable value, this International Model B-3 . . . especially in these days of rising prices. Advanced International engineering in every inch of design, true International quality in every ounce of construction—that's what you get in this 1½-ton, 6-cylinder chassis at only \$695.

Here are some of the exceptional features: Replaceable cylinders, hardened exhaust-valve seat inserts, down-draft carburetion, fuel pump, full-pressure lubrication, thermostatically controlled cooling, full-floating axle, and semi-elliptic auxiliary rear springs. Two wheelbases, 136 and 160 inches.

Thrifty truck buyers—take advantage of today's low price. Make it a point to see this International at the nearby branch or dealer's showroom. Other International sizes range from ½-ton to 7½-ton.

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MOTOR TRUCKS

Seven New Strawberries

(Continued from page 11)

make so good a stand of plants under the hot weather and drought conditions in the South, except perhaps in Florida, southern Louisiana, and south Texas. Under some conditions it may be considered too vigorous in growth. For example, if the runner plants are allowed to mat too thickly, the berries are apt to be small and not many of them in the center of the beds. Although it is generally healthier than Missionary and Klondike, the Blakemore has been subject to leaf spot in a few places. No reason for this is known at present. In a few fields on light soils along the Atlantic Coast, small areas with yellow foliage have shown up, indicating that this variety may be more susceptible to manganese deficiency and to extreme acid soils than some others. It should also be noted that a leaf trouble, the nature of which has not been determined but which is probably identical with one already found in Howard 17 and some other varieties, has appeared in Blakemore in several localities. Because of the firmness and constant color of its fruit, the Blakemore is a variety for the general market, and because of its acidity and high pectin it is well adapted to freezing and preserving.

The Bellmar is a vigorous, hardy sort for fairly low land. At the Minnesota Agricultural Experiment Station, it was the hardiest of all varieties last winter. At the Connecticut Agricultural Experiment Station, it was the second most productive sort, yielding at the rate of over 13,000 quarts per acre. The berries are large and handsome, not as sweet as Dorsett and Fairfax, but not as tart as Blakemore. It is recommended for the area from Connecticut south to Virginia, and west to Missouri and eastern Iowa.

The Southland is an early home garden and local market sort for the South and is of high dessert quality with little acid. It has shown up better each year since its introduction, and for the purpose for which it was introduced, is without an equal. Its foliage is nearest evergreen of any sort in the South, and it is readily distinguished from other sorts in the South by its large, healthy leaves that stay green all winter. Though it has a firm flesh, its skin is too tender to make it suitable for long distance shipping. The berries are especially attractive and uniform in shape. It is very productive, but the flowers are quite sensitive to frost.

(To be concluded in February issue)

AMERICAN FRUIT GROWER



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is a home-in-Philadelphia . . . not only for those who enjoy residence here the year 'round but as well for the many who return to the Bellevue again and again. In the heart of the business and financial district, only a few minutes from the best in concerts, plays, football—the Bellevue-Stratford combines accessibility with quiet luxury . . . May we offer you Bellevue-Stratford hospitality?—at 1933 low prices of course.

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The No. 3 for brush clearing, cuts close to ground and leaves flat top stump. Trims limbs close up to trunk. A great tool for all clearing and trimming work. The No. 2 cuts up to 1½ inches and is an invaluable tool for general farm and orchard work. The No. 1 cuts up to 1½ inch and meets all average pruning requirements. If your local dealer cannot supply, send your order directly to us—Porter tools give satisfaction.

No. 3 . . . \$7.00
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PENETROL
and
NICOTROL

At Your Dealer

JANUARY, 1934

State News

(Continued from page 22)

Century of Progress Exposition during 1934. The association also went on record as opposing certain sections of the proposed food and drug act, giving the secretary of agriculture dictatorial powers and including fruits.

A district committee was requested which would work with the county commissioners and welfare board, in the removal of neglected and infested orchards. Provision was also made for an investigation of California and Virginia residue analysis systems. The final resolution, a copy of which was sent to President Roosevelt, offered an appreciation of the federal financing agencies.

Over 200 fruit growers attended the annual banquet, at which time they dined on Yakima turkey and were entertained by an illustrated lecture on the Coulee Dam Region and National Parks.

Illinois Discusses Insecticides

THE 78th annual meeting of the Illinois State Horticultural Society was held Dec. 12-15 in co-operation with the American Pomological Society's 49th convention at Springfield, Ill. There were three full days of program activities, including several breakfast and luncheon meetings in addition to the banquet program. Almost two complete days were given over to papers and discussions on apple scab and codling moth control and the factors involved in spray residue removal. Experiments in all phases of spraying, particularly the season's experiences with insecticide, was reviewed by B. A. Porter of the Federal Bureau of Entomology, and several state experiment station speakers.

It was made very plain that present spraying methods are in a condition of rapid change. So many spray combinations have been used by different growers throughout the country that there are almost as many different spray programs as there are fruit growers in a single state. This has led to a very complicated evaluation of the various materials used, and also to a wide variety of residue removal practices, which were reviewed very exhaustively by D. F. Fisher, Principal Horticulturist of the U. S. D. A.

A great preponderance of experimental evidence has indicated that calcium arsenate is not proving a satisfactory insecticide, either for codling moth control or from the standpoint of safety to foliage. Arsenate of lead showed during 1933 the same efficiency it has demonstrated in former years in controlling this serious pest, but owing to the increased seriousness of the insect, removal difficulties have become greater and greater, particularly where fruit growers have not been equipped with the necessary machinery. Unlike in the Northwest where lime has not been used in combination with the lead and oil, successful residue removal has not been accomplished through the use of sodium silicate.

Inasmuch as spray removal is largely a chemical process, the greatest strides in increasing efficiency of washing solutions has been from the standpoint of speeding up these chemical reactions. This has been done through increasing the temperature of the solution, the use of wetting agents, and other methods. Where home-made washers have been used, the heating factor has been difficult in many cases to solve successfully. The commercial under-brush

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type washer, which has proved more successful from the standpoint of spray residue removal, is not as yet in very wide use due to a rather high initial cost, not easily borne by the small grower. It was brought out, however, that it is no more costly in the long run to the large commercial grower or co-operative packing house than the other types of washers, which must be equipped with heating units and ample facilities for satisfactory rinsing, drying, and polishing.

Certain fluorine insecticides, particularly those in which natural cryolite is the killing agent, are coming in for an increasing amount of discussion. The Food and Drug Administration is continuing for 1934 with the .01 fluorine tolerance in absence of sufficient evidence to warrant a change. Varying results have been secured with the natural cryolite, depending upon the combination in which it is used in the spray program. In general, however, and when correctly combined, it shows a great deal of promise as a satisfactory insecticide and offers no particular problem in removal. Oil-nicotine combinations were again reported as giving satisfactory results against codling moth.

Other subjects discussed at the Illinois meeting included "Observations on European Horticulture," "The Bud Sport Situation," "Irrigation for Eastern Apple Orchards," "Suggestions for Marketing Apples," and "The European Fruit Market."

A full report of this meeting, including all papers and addresses, will be printed in the annual reports of both the Illinois Horticultural Society and the American Pomological Society, either of which are available through payment of the annual membership dues.

CALENDAR OF COMING FRUIT MEETINGS AND EXHIBITS

- Jan. 2-4—Maryland State Horticultural Society at College Park, Md.
- Jan. 3-5—Massachusetts Fruit Growers' Association at Worcester, Mass.
- Jan. 5-6—Missouri State Horticultural Society at Jefferson City, Mo.
- Jan. 8-12—Indiana State Horticultural Society at Lafayette, Ind.
- Jan. 10-11—Pomological and Fruit Growing Society of the Province of Quebec at Montreal, Canada.
- Jan. 10-12—New York State Horticultural Society at Rochester, N. Y.
- Jan. 10-12—Idaho State Horticultural Association at Boise, Idaho.
- Jan. 15-19—Pennsylvania State Horticultural Association and Farm Products Show at Harrisburg, Pa.
- Jan. 16-19—Western Fruit Jobbers Association at San Antonio, Tex.
- Jan. 24-26—New York State Horticultural Society at Kingston, N. Y.
- Jan. 29-31—Ohio State Horticultural Society at Columbus, Ohio.
- Feb. 2—Rhode Island Fruit Growers' Association and Agricultural Show at Providence, R. I.
- Feb. 14-15—West Virginia Horticultural Society at Martinsburg, W. Va.

PRUNING

(Continued from page 14)

is not a substitute for the other but to a certain extent this is true. In some work at the Ohio Station, Ellenwood and Howlett have found Jonathan affected to only a small extent by thinning if the trees had been well pruned. This applies to both size and color, but particularly to the latter. With Grimes the difference was not so marked in color from the thinning but even greater in its effect on size. In fact any variety that is likely to set in clusters or "ropes" will require some thinning to increase size regardless of the pruning. This is more true of old than young trees. Such varieties would be Baldwin, Yellow Transparent, Grimes Golden, Wealthy, and York Imperial as contrasted with Stayman, Delicious, Winesap, Arkansas, and Arkansas Black.

The Variety Problem

Mention has already been made to the relation of pruning practice to the variety problem. This is likewise true of the form or training of the tree for the modified leader type would be better adapted to some than others. Since Rome Beauty tends to bear heavily from terminal buds, the willowy branches soon hang downward and a certain amount of undercutting becomes necessary, which is in contrast to a Grimes, a Rhode Island Greening, or Yellow Transparent.

Unfortunately this subject has not been exhausted by experiments but the general growth characteristics of varieties of all fruits are being noted and described which will lead to a better understanding of pruning. Marshall, Cardinell, and Hootman of Michigan have noted that of the varieties Duchess, Grimes, Baldwin, Stayman and Spy, Grimes suffered a greater reduction in yield and size of tree than the others.

The angle which limbs make with the main axis of the tree is also a matter which requires special pruning treatment if later breakage is to be avoided.

Localized Influence of Pruning

We often think of a tree as a unit, but an examination of a pruned tree shows that, to a considerable extent, the effect is local. The branches nearest the cut are most affected, likewise the fruiting. The writer watched some heavily pruned (dehorned) Keiffer pear trees for a number of years. Each year long whip-like growths would make a veritable hedge out of the tops of the trees which produced no fruit, while the lower portions which were untouched continued to fruit as usual.

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NATION-WIDE NEWS

The spray residue tolerance requirements for 1934 have been announced by the U. S. Food and Drug Administration of the U. S. D. A. as follows: Arsenic .01, Fluorine .01, Lead .019 (grains per pound of fruit).

A real friend to Agriculture has been lost in the recent death of Alex. Legge, well known as the first chairman of the Federal Farm Board. Legge's great contribution in a long and notable career was his leading part in the mechanization of agriculture.

The apple market is steady and holding previous gains. Eastern Greenings advanced slightly in some markets, averaging \$1.12 to \$1.25 per bushel in eastern cities compared with 65-90c a year ago. Stay-greens ranged \$1.35 to \$1.65 a box in various city markets. Northwestern apples sold at \$2.25 to \$2.35 per box for extra-fancy grade in central market points.

The acreage of wine grapes required to meet the increased demand due to the repeal of the 18th Amendment is estimated to be fairly ample. There were 366,844,000 grape vines of all ages in the country at the time of the census of 1930. Seventy per cent of this acreage is in California.

The trend of peach production is downward in the South and California, but upward in Colorado and Michigan.

The Florida Citrus Growers Clearing House Association estimate the 1933-34 crop from Florida at 55,000 cars. The summary was based on estimates of packing house managers and indicated a total of 34,675 cars of oranges, 17,000 cars of grapefruit and 3,825 cars of tangerines. The figures include truck, rail and boat shipments.

There are now about 100,000,000 apple trees in the United States. Twenty-five years ago there were twice this number but the average annual production has changed little during that period.

Due to the lower freight rates, water shipments of fresh fruit from the Pacific Coast to eastern ports are rapidly gaining in popularity.

Filbert growers of Washington are learning that blue jays are their natural enemy. A large portion of the filbert crop near Rochester, Wash., was stolen by these birds. One grower, even after shooting a number of them, lost almost his entire crop.

Dr. Beverly T. Galloway, recently retired from the U. S. D. A. under the age limit clause, is not planning to retire from active research. He will divide his time between Washington, D. C., and his winter home on a small tract in Florida where he will devote particular attention to new plants of value to Florida and the South. Dr. Galloway was largely responsible for the creation of the Bureau of Plant Industry, of which he was chief from 1901 to 1913. In 1913-14 he was Assistant Secretary of Agriculture, was then Dean of Agriculture at Cornell University for two years, and returned to the U. S. Service in 1917.

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